Sub-National Good Governance and Development: A Comparative Study of African countries

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Abstract

This study investigates the relationship between sub-national good governance and development in Botswana, Ghana, Tanzania, and Uganda using a panel data analysis of 21,522 households. Existing literature on this relationship remains sparse, therefore this paper aims to explore this relationship further. This study analyzes national and sub-national level data from the aforementioned countries, covering 75 regions for the years 2008, 2013, 2016, and 2019. Sub-national good governance is measured using the Afrobarometer and focuses on the dimensions of rule of law and voice and accountability. Development is measured using the sub-national Human Development Index from the Global Data Lab, as well as the Human Development Index from the United Nations Development Program. Using a fixed effect panel regression, this study establishes a mixed relationship between sub-national good governance and development. Sub-national rule of law and development have a positive relationship, whereas sub-national voice and accountability and development have a negative relationship. The novel implication brought forth by this study is that development policies can be influenced by paying attention to sub-national good governance perceptions, not only national ones. The relationship between sub-national good governance and development can be further explored by including other sub-national and national good governance dimensions.

Acknowledgements

Table of Contents

1. Introduction

Recently, the World Bank announced that "the ongoing Covid-19 pandemic has exacerbated global income inequality, partly reversing the decline of the previous two decades" (Adarov, 2022). Low- and mid-income countries in particular have been hit hard by this, counteracting the progress made in the Sustainable Development Goals (SDGs). Poverty and sub-national inequality are problematic, as they come with multiple negative side effects for society (Bailey et al., 2020; Giannakis & Bruggeman, 2017; Rodríguez-Pose, 2018). Such side effects range from the erosion of political, economic, and social foundations in a region to an increase in populism and a decrease of trust in institutions. Eventually, this leads to migration to more prosperous regions by those capable of doing so. Which tends to be higher educated citizens, subsequently ensuring further poverty and inequality in the process (Rodríguez-Pose, 2018). To prevent these undesired effects, the members of the United Nations adopted the SDGs in 2015. The SDGs consist of 17 goals, which act as a blueprint for ensuring a better and more sustainable future. As this study focuses on the relationship between sub-national good governance and development, SDG1 (no poverty), SDG10 (reduce inequality within and among countries), and SDG16 (promote just, peaceful, and inclusive societies) are especially relevant for this study.

SDG 1, 10, and 16 evaluate the situation globally regarding poverty, inequality, and governance. To begin with, SDG1 focuses on reducing poverty globally, which has become more difficult to achieve, as the triple threat of climate change, conflict, and Covid-19 has increased poverty levels for the first time in 30 years. In fact, World Bank President David Malpass stated that, "The pandemic and global recession may cause over 1.4% of the world's population to fall into extreme poverty" (World Bank Group, 2020). These increases in extreme poverty are most likely to occur in countries that already possess high poverty rates. Furthermore, according to the World Bank and the United Nations, Covid-19 also changes the demographic of the "new poor" because within-country poverty increases as well among urban areas, whereas it is traditionally more common among the rural population (World Bank, 2020). Additionally, the WHO expects over half a billion people to enter poverty due to medical costs alone (Sabet-Parry & Guo, 2021). Meanwhile, SDG10 focuses on global and sub-national inequality. The United Nations expects the GINI to increase by 6% for low- and mid-income countries due to the triple threat of climate change, conflict, and Covid-19. According to the World Bank, within-country inequality levels of low- and mid-income countries have been decreasing for the past 25 years, but they have tremendously increased during the pandemic. Furthermore, the pandemic is likely to reverse progress made in reducing inequality following the 2008 financial crisis. Finally, SDG16 focuses on promoting peaceful and inclusive societies for sustainable development, providing access to justice for all, and building

effective, accountable, and inclusive institutions at all levels. To this end, according to the United Nations, effective, transparent, and responsive governance is inextricably linked to making progress in reducing poverty and inequality. The Covid-19 pandemic has only highlighted this further, as governance failures have resulted in increasing inequalities, deteriorating trust in public intuitions, and significant obstacles to accessible services, including health services. In turn, the United Nations claims that effective recovery from the Covid-19 pandemic will likely require the different dimensions of SDG16 to be at the core of the recovery processes.

Since the end of the cold war, good governance has been implemented in the development strategies of the United Nations, the World Bank, and other international organizations (Weiss, 2000). Good governance implies "governing justly and in a manner acceptable by the governed," and it is present on the local, federal, and national level (Frimpong, 2017). The characteristics of good governance include "participatory, consensus oriented, accountable, transparent, responsive, effective, efficient, equitable, and inclusive and follows the rule of law" (Sharma, 2007). The relationship between good governance and economic development is extensively studied in literature on the national level, and a positive relationship between good governance and development ensures the dominant role of good governance in development policies (Börzel et al., 2008; Emara & Chiu, 2016; Gaghman, 2020; Omri & ben Mabrouk, 2020; Weiss, 2000). Improving the quality of governance is not only "essential" for economic development, but development is impossible without it (Kaufmann et al., 2009; Sharma, 2007). Despite this, however, the relationship between sub-national good governance and development remains vastly understudied, which is intriguing considering good governance is especially important at the local level, as numerous interactions occur between citizens and governance on this level (Wee, Ross & Wolff, 2020). Furthermore, increasing knowledge on sub-national governance is crucial for developing peace between regions and prevention of conflict according to Wee, Ross, and Wolff (2020).

During the 2008 financial crisis, it became clear that regions were impacted by the crisis differently. Often, the quality of governance was closely related to the degree of damage, suggesting that sub-national governance is important when examining regional development (Ezcurra & Rios, 2019). Literature also increasingly suggests that the Covid-19 crisis impacts regions differently on a social and economic level as well (Adarov, 2022; Bailey et al., 2020). Two good governance characteristics appear to play a vital role in the resilience of regions during the Covid-19 pandemic, as well as the resultant economic decreases (Martínez-Córdoba et al., 2021). Specifically, rule of law and voice and accountability appear to considerably influence how regions respond to an external shock (Basu, Basu & Tapia, 2022). Some regions grow while other regions decline (Giannakis & Bruggeman, 2017). The Covid-19 crisis has only increased this divide in economic growth, as not all

regions have been impacted equally (Bailey et al., 2020). This is problematic, as regions are becoming increasingly responsible for implementing policies and are dealing with more complex issues (Potts, 2010). Unfortunately, this inequality between regions is the norm rather than the exception (Giannakis & Bruggeman, 2017). A lack of literature on the relationship between sub-national good governance and development might explain why development policies do not influence all regions equally, as such literature largely discusses national good governance variables.

This study aims to shine light on the relationship between sub-national good governance and development in order to further understanding of the relationship between sub-national good governance and development. In this way, future development policies can better account for sub-national good governance. As the triple threat of climate change, conflict, and Covid-19 likely continues to affect development globally, it is in scientific and societal interest to investigate the relationship between sub-national good governance and development. While a few such studies have focused on the quality of governance on the sub-national regional level and sub-national development, these studies tend to focus on just one country (Helao, 2015; Özdemir, 2013) or else focus on a comparison between high-income countries on the sub-national level (Ezcurra & Rios, 2020; Rodríguez-Pose & Garcilazo, 2015). As such, the relationship between sub-national good governance and development has not yet been studied in a comparative study of low- and mid-income countries, which are most at risk of experiencing rising levels of poverty and inequality. To this end, this study strives to answer the following research question:

RQ: *"What is the relationship between sub-national good governance and economic development on the sub-national level?"*

To answer this question, the following sub-questions are explored:

SRQ 1: *"Does the relationship between sub-national good governance and development differ on the national and sub-national level?"*

SRQ 3: *"What is the relationship between sub-national rule of law and economic development on the sub-national level?"*

SRQ 3: *"What is the relationship between sub-national voice and accountability and economic development on the sub-national level?"*

As previously mentioned, low- and mid-income countries are in particular danger of increasing inequality and poverty levels. For instance, Africa has persistently been one of the most unequal continents (Shimeles & Nabassaga, 2018). Most low-income countries in Africa, however, have had access to foreign aid or capital, yet the result of this access differs vastly per country

(Qayyum & Haidar, 2012). Africa has also been struck especially hard by the Covid-19 pandemic, resulting in much of the progress of past decades being reversed, according to the World Bank. Therefore, this study focuses on Africa, utilizing the Afrobarometer to observe differences in sub-national good governance and compare these differences with the Sub-National Human Development Index (SHDI) from the Global Data Lab (GDL) to account for sub-national development. Furthermore, the Human Development Index (HDI) from the United Nations Development Programme (UNDP) is employed to account for national development. In this way, the relationship between sub-national good governance and development can be studied on both the national and sub-national level.

This study was conducted following severe warnings from the United Nations and the World Bank, who identified Africa as one of the region's most likely to suffer an extreme increase in poverty due to the Covid-19 pandemic. As major differences exist between the quality of governance and economic development sub-nationally, Africa provides an excellent opportunity to zoom in on the sub-national differences (Qayyum & Haidar, 2012). To observe the relationship between sub-national good governance and development, this research studies the countries of Botswana, Ghana, Tanzania, and Uganda on the sub-national and national levels.

In the following chapter, development is discussed in greater detail. Additionally, good governance and its various dimensions are discussed, after which a framework for this study is established. Chapter two ends with the formulation of hypotheses for this study. Following this, chapter three discusses the data decisions and methodology, after which chapter four presents the results of the data collection and analysis. Finally, chapter five discusses the results and limitations to conclude this study.

2. Theoretical Framework

2.1 Economic Development

A recurring issue in development concerns whether the focus should be on poverty, growth, or inequality (Bourguignon, 2004). According to Bourguignon, poverty can be divided into absolute and relative poverty. Absolute poverty is measured by examining a fixed poverty line that determines a fixed purchasing power, which subsequently determines whether social and physical essentials can be met. Focusing on absolute poverty means ensuring everybody satisfies their most fundamental needs, which does not have to be equal between countries. Relative poverty, meanwhile, focuses not on a fixed poverty line, but rather on a fixed proportion of the mean income of the population. The European Union, for example, considers households to be in poverty when their purchasing power is 50% below the mean purchasing power of member countries. As the SDG 1 effectively argues, it is vital to reduce absolute poverty, but according to SDG10, to reduce inequality, relative poverty also cannot be ignored. Focusing solely on absolute poverty would not reduce inequality, and vice versa, so when examining economic development, it is vital to look at both. Furthermore, focusing solely on absolute poverty will not ensure the achievement of SDG1; rather, it is more likely that SDG1 will be achieved by focusing on SDG10 as well (Lakner et al., 2019). According to Lakner et al., a "1% annual decline in each country's Gini index is shown to have a bigger impact on global poverty than if each country experiences 1 pp higher annual growth rates than forecast."

Ignoring within-country inequality in favor of focusing on absolute poverty can also negatively affect social cohesion (Muntaner & Lynch, 1999). Although income differences between countries do not lead to a decrease in social trust, within-country differences in economic development do harm social trust and decrease social cohesion in a society (Kanitsar, 2022). This inequality in economic development subsequently leads to social fragmentation and other ills in a society. Additionally, this form of inequality leads to inequality in opportunities and asset ownership between households (Shimeles & Nabassaga, 2018).

Both absolute poverty and relative poverty have experienced a sharp increase since the start of the Covid-19 pandemic, undoing some of the progress made over the previous years. According to both the World Bank and the United Nations development program, both absolute and relative poverty are increasing at a rate not seen in decades. However, the impact of the pandemic is not equal between countries, nor even within countries. In turn, this emphasizes the need for a better understanding of economic development inequalities on the sub-national level.

Development can be measured using multiple methods, such as by measuring GDP per capita to measure absolute poverty while simultaneously examining the GINI to measure relative poverty. Both variables are excellent for observing how a country is doing; however, they reveal surprisingly little about the lives of households (Ranis et al., 2006). Another possibility would be to look at poverty by examining the International Wealth Index (IWI). The IWI is a comparable asset-based index of household's material well-being that can be used for low- and middle-income countries (Smits & Steendijk, 2015). It is based upon data from over 2.1 million households across 97 developing countries. In addition to examining absolute and relative poverty, the IWI further adds the benefit of time and place to the dataset. The IWI however appears to focus more on economic development than development combined of multiple dimensions.

Another method of measuring development involves examining the HDI, which measures development on a national level and incorporates three dimensions: long and healthy life, knowledge, and a decent standard of living. This offers an excellent method for measuring development, as it includes multiple indicators and incorporates more information. Criticism exists however, due to the limited number of dimensions (Ranis et al., 2006). Ranis et al. (2006) for example identified 11 categories of human development. Additionally, the authors indicate that the HDI is more efficient in measuring development in developing countries than developed countries. Albeit this criticism appears valid a better alternative has yet to emerge and the HDI is used by the United Nation to assess development.

A final option for observing development involves looking at the Sub-National Human Development Index (SHDI). The SHDI indicates countries' combined achievements in education, health, and standard of living. In this way, it has become the key reference of the United Nations Development program indicator for assessing countries' socio-economic performance (Smits & Permanyer, 2020). The SHDI improves upon other variables such as the HDI by including an environmental dimension to the social and economic dimensions. T

All forementioned measurement options for development have their pros and cons, to measure development both on the national and sub-national level a combination between HDI and SHDI will be utilized in this study. The HDI examines development on the national level, whereas the SHDI studies development on the sub-national level. However, to properly study development, both the sub-national level and the national level need to be taken into account, because regional and national differences in a variable can sometimes have different or even opposing effects (Kanitsar, 2022). For example, an increase in income on a national level increases regional inequality, whereas an increase in income on the regional level decreases inequality (Ezcurra, 2019). Hence it is

important to use both measurements of development when studying development. As this study investigates the relationship between sub-national good governance and development both SHDI and HDI will be used to measure development.

2.2 Discussion on Good Governance

Before discussing good governance further, however, a definition should first be established. To begin with, governance and government are not synonyms; rather, governance concerns how the government and other social organizations interact, how they relate to citizens, and how decisions are being made (Graham et al., 2003; Weiss, 2000). This includes institutions and actors within the national government, but it also includes institutions and actors outside of it (Keping, 2018). Therefore, the study of governance involves more than simply the national or federal government. Good governance implies "governing justly and in a manner acceptable by the governed," and it is present on the local, federal, and national level (Frimpong, 2017).

Good governance can be conceptualized by the following characteristics: "Participatory, consensus oriented, accountable, transparent, responsive, effective, efficient, equitable, and inclusive, and follows the rule of law" (Sharma, 2007). This can probably be best summarized by using the world governance indicators (WGIs) created by the World Bank. These WGIs consist of six indicators of good governance and allow for comparison when observing good governance cross-country and sub-nationally. The first indicator, "Voice and Accountability," refers to freedom of expression, freedom of association, and the extent to which citizens are able to select their government. The second indicator, "Political stability and Absence of Violence and Terrorism," captures citizens' perceptions regarding the likelihood of the government collapsing. The third indicator, "Government Effectiveness," concerns citizen perceptions of the effectiveness of public services and the quality of institutions. The fourth indicator, "Regulatory Quality," captures citizen perceptions of the government's capacity to formulate and implement effective policies. The fifth indicator, "Rule of Law," concerns citizens' perceptions on the extent to which agents abide by society's rule of law and enforce property rights, as well as the quality of the police and courts. The sixth and final indicator, "Control of corruption," captures citizen perceptions regarding the extent to which public power is used for private gain. The effects of these variables can often be observed using questionnaires or by examining the quality of institutions within a country (Decker & Lim, 2008).

Good governance has been a helpful concept for practitioners and scholars alike (Kinyondo & Pelizzo, 2019). However, the definition of "good governance" differs greatly among researchers, institutions, and political leaders, as does their opinions on the topic (Uddin & Joya, 2007; Weiss,

2000). Andrew (2010) suggests that working on good governance implies a search for a "one-way fits all" model of effective governance. He argues that no such model exists, as national culture shapes good governance policies, and countries that exhibit good outcomes can use highly different governance structures to reach such a conclusion (Andrew, 2010; Blunt, 1995). Although this conclusion is true it does not render the complete concept of good governance useless. Good governance is broader than a "one-way fits all" model, including practitioners and scholars in the search for measures and policies to improve the efficiency and development of the country. Additional information and governance policies regarding corruption, legitimacy, transparency, accountability, and the rule of law have emerged as a result of good governance, subsequently improving the effectiveness and development of numerous countries without the need for a "one-way fits all" model (Uddin and Joya, 2007).

The very notion of "governance" as a concept on its own distinct from "government" has been brought to the attention of both experts and the public thanks to the World Bank's usage of the term "good governance" in their work (Doornbos, 2001: 94). In this way, a previously obscure term on the fringes of academic interest became a booming area of research following the World Bank's first reporting on good governance, with publications relating to governance in general rising from about 10 in the early 1990s to 800 a year in 2000 (Lateef, 2016: 22). Therefore, even if the concept of good governance had failed to fulfil its potential—which it did not—it still contributed to the conception of governance as a research field. Moreover, concepts such as corruption and transparency and their universal importance for governance quality have since been well investigated by scholars and recognized by practitioners (if only in theory). Accordingly, the concept of good governance and its measures set by the World Bank drew the attention of scholars and policymakers to important aspects for improving quality of governance.

Furthermore, good governance enables measuring governments beyond anecdotal or economic data (Kaufmann et al. 2009). Other measurements such as happiness economic measurements are not objective enough (Johns & Ormerod, 2007), and the GDP is also problematic to use solely for country comparisons (Syrquin, 2011). Other measurements tend to leave key insights out of comparisons and focus on one, or a select few, dimension(s). This leaves the various good government variables to compare nations with, making good government measurements one the best tools for scholars and practitioners to compare nations and regions.

The presence of good governance in both the private and public sector in a country has been positively linked to sustainable economic development (Qayyum & Haidar, 2012). This presence of good governance allows for stability and economic development. Furthermore, this causes balanced

growth that ensures long-lasting stability (Northover, 2005). In addition, the quality of governance makes an enormous difference for economic development (Ezcurra & Rios, 2020; Mohammadi et al., 2017; Rodríguez-Pose & Garcilazo, 2015). Some studies also link good governance to democratic governance (Helao, 2015). Beyond this, empirical studies have revealed that the presence of good governance also leads to faster economic development. On a national level, an increase in good governance leads to increased quality of life and national well-being (Helliwell et al., 2018; Northover, 2005). Countries with lower governance quality tend to perform worse in economic development and suffer from a variety of problems, such as corruption and nepotism. Meanwhile, as stated above, the literature suggests that good governance has a positive relationship, leading to hypothesis 1:

H1: Good governance has a positive relationship with economic development on the national level.

As Frimpong (2017) states, governance is present on the local, federal, and national level. However, the literature on regional good governance remains sparse, with most studies examining national good governance. There are indications that the quality of governance has the same effect on national and sub-national economic development (Ezcurra & Rios, 2020; Rodríguez-Pose & Garcilazo, 2015). Established literature further suggests that good governance positively influences economic development. As the stability provided by good governance provides ample room for development to occur. There are also suggestions within the established literature that good governance and regional development follow the same relationship, though such studies have largely focused on high-income countries, such as the European Union (Giannakis & Bruggeman, 2017). The fact that the European Union has been measuring and promoting sub-national good governance likely has something to do with the presence of these studies. The precise relationship, however, remains understudied thus far, and evidence concerning the relationship remains rather mixed (Resnick & Birner, 2006). Based upon the literature, hypothesis 2 was formulated as follows:

H2: Good governance has a positive relationship with economic development on the sub-national level.

Good governance does not occur automatically or by default; rather, it tends to be a process that numerous countries strive to achieve (Ahluwalia & Miller, 2020). Poor governance, meanwhile, has been named one of the major explanatory variables for the corruption and inequality in economic development present in the African continent (Frimpong, 2017; Shimeles & Nabassaga, 2018). The presence of foreign aid or capital alone also does not ensure economic growth in low-income countries, as many African countries have access to this. The difference in sustainable economic growth between low-income countries with equal access appears to be directly related to the presence of good governance (Qayyum & Haidar, 2012). Lack of such good governance even seems to be related to a decline in economic development, as aid and capital are being misused (Annen & Knack, 2021). In practice, this means that a country with high good governance and aid will be able to better society, whereas a country that receives aid but without good governance will experience an increase in corruption, decreased talent in the bureaucracy, and further decreased quality of governance. In turn, this either enhances or decreases the economic development growth in the country.

According to the OECD, good governance dimensions have been tested during the Covid-19 pandemic, with both the OECD and the World Bank agreeing that good governance dimensions have been instrumental in determining the resilience of countries and regions in the face of the Covid-19 impact (Basu, Basu & Tapia, 2022). Two good governance characteristics appear to play a vital role in the resilience of different regions during this pandemic and the subsequent economic decrease it has caused (Martínez-Córdoba et al., 2021). Specifically, rule of law and voice and accountability appear to greatly influence how regions respond to an external shock. This is confirmed by traditional literature, which suggests that these characteristics of good governance will likely have the largest effect, as other traditional characteristics such as control of corruption have had mixed results in terms of significance and insignificance in the African continent (Al-Naser & Hamdan, 2021; Good & Taylor, 2008; Holm, 1987). Therefore, rule of law and freedom of speech are used as the explanatory variables for this study, as they appear to be the most consistent variables of importance during sub-national shifts and economic development.

2.2.1 Rule of Law

Before analyzing rule of law, however, it must first be defined. To clarify, rule of law concerns citizen perceptions regarding the extent to which agents abide by the society's rule of law and enforce property rights, as well as the quality of the police and courts. This can be measured using formal institutions, which is often employed for developed countries, or else by observing informal institutions, which is more common for developing countries (Haggard et al., 2008).

Considering this study focuses on developing countries, informal institutions are observed using household perception surveys.

Rule of law is also positively linked to economic development, as it is traditionally linked to consumer trust in contracts as well as the power to enforce contracts. A low score on the rule of law would, for example, indicate that contracts could not be enforced, meaning investments, purchases, and written agreements would have less meaning, as they are more easily broken. Rule of law is a variable often indicated with economic development, as without rule of law, the transaction costs within an economy are high, negatively influencing economic development. Literature further suggests that rule of law is more vital to economic development than the quality of institutions present (Qayyum & Haidar, 2012; La Porta et al., 1998; Djankov et al., 2002). Beyond this, rule of law is an important characteristic of good governance in low-income countries, as this is one of the most lacking characteristics (Akanbi & Shehu, 2012). Especially in developing countries, the literature suggests that rule of law can considerably influence development (Decker & Lim, 2008). As such, it is expected that rule of law will be of significance when determining within-country economic development.

To observe rule of law using informal institutions, three measurements are employed: trust in the rule of law, perceived corruption of the rule of law, and how equal is the rule of law. All three are measured using household perceptions to observe the sub-national differences within a country. These three variables have been successfully used in Mexico to determine "legal system and property rights" on the sub-national level (Ashby et al., 2013). Trust in the rule of law is also related to property rights, as the more trust households have in the rule of law, the more incentives they have to invest and trust that contracts will be upheld (Haggard et al., 2008). The relationship between property rights and economic development is firmly embedded in the literature, which concludes that the higher the property rights, or the greater the trust in the rule of law, the greater the economic development.

Perceived corruption of the rule of law is also linked to the theory on property rights (Johnson et al., 2002). For instance, Johnson (2022) used survey questions to determine perceived corruption, trust in the rule of law, and equality under the rule of law in order to rate the rule of law between different countries. The findings indicated that higher corruption, lower trust, and perceived inequalities under the rule of law produced an adverse effect on reinvestments. This is echoed by other studies observing a negative relationship between corruption and economic development (Mendonca & Fonseca, 2012).

There are incentives to hide corruption in the rule of law within formal institutions, so using questionnaires to observe informal institutional practices can provide a more accurate image (Haggard et al., 2008). Corruption in rule of law is labelled as petty corruption, as the household questionnaires identify views of typical households, who are not involved with high-ranking officials or large aid sums (Nwabuzor, 2005). This type of corruption should be insignificant on the national level according to Nwabuzor. In turn, the discussed literature leads to the following hypotheses:

H3: Rule of law has a positive relationship with economic development on the national level.

H4: Rule of law has a positive relationship with economic development on the sub-national level.

2.2.2 Voice and Accountability

Voice and accountability refers to freedom of expression, freedom of association, and the extent to which citizens are able to select their government. In turn, this acts as a characteristic of good governance, because it measures a degree of freedom. People who indicate they are free to say what they think also report higher levels of trust in their leaders, lower levels of corruption, and better government performance (Helao, 2015). In this way, freedom of expression appears to be a significant variable when studying voice and accountability. Additionally, freedom of expression appears to be related to innovation according to some studies (Wang & Wang, 2022). As a result, this offers one explanation for the positive relationship with development found in the literature.

Voice and accountability has been positively linked to economic development on the national level (Alam & Shah, 2013). According to the literature, an increase in economic and political freedom leads to an increase in national development (Nelson & Singh, 1998; Prendergast, 2005). When conducting a major literature review, the most common determinants of economic freedom include institutional freedom and greater civil liberties, which ensure more economic freedom (Lawson et al., 2020). Economic freedom is directly linked to economic development in established literature. An African example of this can be found in Botswana, where voice and accountability has produced a measured, positive impact on economic development on the national level (Ghebremusse, 2018). It remains unknown whether this translates to the sub-national level as well, though it is to be expected, given that this is the case in nations of the European Union (Charron et al., 2014; Ezcurra & Rios, 2019).

Still other studies have suggested that voice and accountability is not positively related to development for developing countries. Nelson and Singh (1998), for example, suggest that political freedom leads to increased corruption and bribery, thus negatively impacting rule of law and

development. After observing the long-term effects of political freedom on development, however, they concluded that political freedom positively influences national development (Nelson & Singh, 1998). In turn, the discussed literature leads to the following hypotheses:

H5: Voice and accountability has a positive relationship with economic development on the national level.

H6: Voice and accountability has a positive relationship with economic development on the sub-national level.

2.2.3 Control Variables

Along with rule of law and voice and accountability, other factors might also influence economic development. These variables are accounted for as control variables. The first control variable is called democracy. According to some studies, the presence of democracy is suggested to be an important variable influencing economic development (Helao, 2015). Furthermore, democracy is also likely to be related to economic development (Robinson, 2006).

Democracy's influence on development however is debated, as some studies suggest a positive relationship while other studies reveal an insignificant relationship. Certain counter studies, such as by Przeworski et al. (2000), suggest that the type of regime has no effect on economic development. Meanwhile, there are studies suggesting that democracy on its own has no influence on development, which instead depends on other variables, such as open markets and transparency (Decker & Lim, 2008; Nelson & Singh, 1998). Decker and Lim studied democracy through an institutional perspective, finding that it is neither necessary nor sufficient on its own to ensure development. Additionally, some studies suggest that democracy is positive for developed countries, yet negative for developing countries due to various other factors (Nelson & Singh, 1998). Because of these conflicting views concerning the relationship between democracy and development, this has been included as a control variable.

Household traits such as gender and age influence economic development and should be accounted for when running a regression (Appleton et al., 1999; Buvinic et al., 2009; Forsythe et al., 2000; Oostendorp, 2009). Both gender and age have been found to play significant roles in economic development. The location of the household, urban or rural, also significantly influences development, as urban areas have access to a different employment market and different services. Internet usage and television ownership also likely influence economic development, as a certain degree of wealth is required to use these services. Furthermore, employment status has been

included as a control variable, as this significantly influences the household's economic development. It is to be expected that democracy and individual traits influence economic development, and so they are included as control variables in this study.

2.3 Framework of Analysis

It is important to note that most of the previous literature has studied the relationship between national good governance and national development, meaning the exact relationship between sub-national good governance and development remains unclear. There have been no studies in which the SHDI, Afrobarometer, and the HDI are utilized to study how good governance influences economic development. As such, to study this relationship, these three datasets are merged and analyzed. Specifically, this research studies the relationship between good governance and economic development on the sub-national level. As it is theorized that the good governance variables of "Rule of Law" and "Voice and Accountability" are positively related to economic development on the sub-national level, "Rule of Law" and "Voice and Accountability" function as the independent variables. Economic development, meanwhile, serves as the dependent variable. Sub-nationally, the SHDI is employed to represent economic development, and the HDI is included to represent economic development on the national level. Figure 1 below displays the framework of analysis to observe the relationship between good governance and economic development on the sub-national level. Furthermore, it also demonstrates the separation of rule of law and voice and accountability to include the different indicators, as suggested in the literature. Beyond this, Figure 1 displays the framework of analysis to observe the relationship between good governance and economic development on the national level, which reveals whether differences between a national and sub-national are present. It again illustrates the separation of rule of law and voice and accountability to include the different indicators, as suggested in the literature.
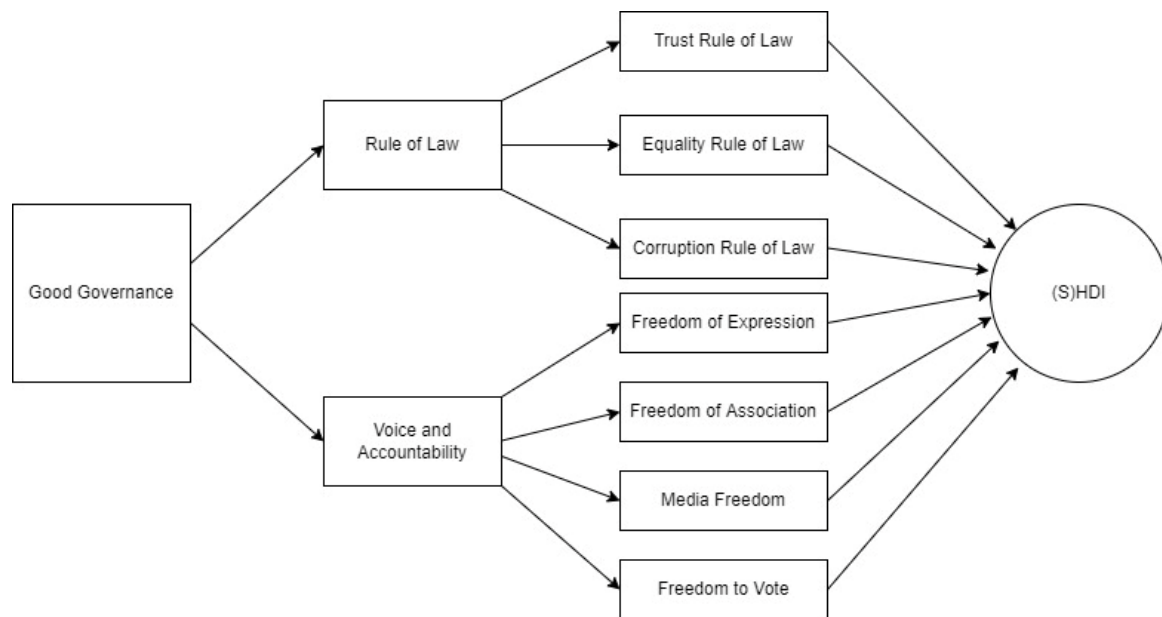
Figure 1: Framework of analysis on the relationship between sub-national good governance and development.

3. Methodology

3.1 Research Design

This study investigates the relationship between sub-national economic development (SHDI), rule of law, and voice and accountability on the regional level in Botswana, Ghana, Tanzania, and Uganda. To study this relationship, data from the Global Data Lab, United Nations Development Programme, and Afrobarometer has been merged and analyzed using fixed-effect panel regressions. This combined database of subnational development indicators and subnational good governance indicators does not yet exist and represents a new contribution by this research. This merged database utilizes fixed-effect panel regressions to determine the relationship between the good governance characteristics of voice and accountability, rule of law, and economic development. Botswana, Ghana, Tanzania, and Uganda are selected for study on the regional level, totaling 75 regions. Economic development serves as the dependent variable, rule of law and voice and accountability serve as the independent variables, and democracy and household traits have been included as control variables in some regressions.

3.2 Data Collection

3.2.1 Global Data Lab

For this study, a dataset has been created based upon the SHDI dataset from the Global Data Lab and Afrobarometer. The Global Data Lab is a data and research institute that develops databases, indicators, and instruments for monitoring and analyzing the status and progress of societies. Since its creation, the Global Data Lab has created over 100 sub-national development indicators. The Global Data Lab combines numerous large-scale household surveys conducted in low- and middle-income countries, such as the DHS and barometers. The total data contains information on millions of households throughout the developing world. A total of 135 countries are included, covering over 1,200 sub-national regions. Data collected from the Global Data Lab comprises SHDI data of Botswana, Ghana, Tanzania, and Uganda on the regional level. This results in data for 54 regions from 2008 to 2019, as displayed below in Figure 3. Additionally, HDI data has been collected for the aforementioned four countries from the UNDP.

Country	Regions	Years
Botswana	10	2008–2019
Ghana	10	2008–2019
Tanzania	25	2008–2019
Uganda	9	2008–2019

Figure 3: SHDI country information.

3.2.2 Afrobarometer

The Afrobarometer is a pan-African non-profit survey research network that conducts public attitude surveys on democracy, governance, the economy, and society. The vision of the

Afrobarometer focuses on helping to create a world in which African development is anchored in realities and aspirations of people. Its mission is to ensure citizen voice becomes a key pillar in African policy and decision-making. The Afrobarometer collect data using interviews regarding the lives of ordinary Africans to provide them with a voice. The first round was from 1999 to 2001 and covered 12 countries: Botswana, Ghana, Lesotho, Malawi, Mali, Namibia, Nigeria, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. Over the course of the past decades many more countries have been included in their coverage. While Afrobarometer started with a coverage of 12 countries, by 2021 it covered over 34 African nations. In total Afrobarometer has conducted eight rounds of survey data collection.

For this study data from round 4 (2008), round 5 (2013), round 6 (2016), and round 7 (2019) have been included from the Afrobarometer. Covering sub-national data from Botswana, Ghana, Tanzania, and Uganda, totaling 75 regions. Indicators collected covered good governance variables and control variables. The good governance focus will be on the characteristics of "voice and accountability" and "rule of law," both of which serve as independent variables. The control variables include survey data on democracy. Both of which have been collected from the Afrobarometer. The Afrobarometer sub-national country data collected is displayed in figure 4.

Country	Regions	Round
Botswana	24	4, 5, 6, 7
Ghana	9	4, 5, 6, 7
Tanzania	30	4, 5, 6, 7
Uganda	12	4, 5, 6, 7

Figure 4: SHDI country information.

3.2.2 United National Development Reports

As the United Nations lead agency on international development, the United Nations Development Reports (UNDP) works in 170 countries and regions to eradicate poverty and reduce inequality. The UNDP focuses on sustainable development, democratic governance and peace building, and climate and disaster resilience. The UNDP builds the HDI to measure development on the national level for a country-to-country comparison. The HDI will be used to measure the national development in this study and HDI data from Botswana, Ghana, Tanzania, and Uganda will be collected for the years 2008, 2013, 2016, and 2019.

3.3 Case Selection

As mentioned in the previous section the first round of the Afrobarometers covered 12 countries: Botswana, Ghana, Lesotho, Malawi, Mali, Namibia, Nigeria, South Africa, Tanzania,

Uganda, Zambia, and Zimbabwe. Albeit there have been more countries added over the past two decades the original 12 countries uphold the most data as the Afrobarometer have covered these nations the longest. To gain a deeper understanding of the relationship between good governance and economic development on the sub-national level the following countries have been selected: Botswana, Ghana, Tanzania, and Uganda. Round 4, round 5, round 6, and round 7 have been selected as these cases include the most relevant questions to measure good governance.

Botswana is a landlocked country in southern Africa with 2.4 million people. Formerly one of the poorest countries in the 1960s, with tremendous growth in the past decades (Lewin, 2011). This growth came primarily from mineral trade, yet Botswana managed to avoid the resource curse. Some researchers, like Lewin, have argued this is largely due to its homogeneous population. Additionally, Botswana scores high remarks in national democracy indexes and being considered a flawed democracy. Botswana is known to have a unique form of regional direct democracy which includes minorities and allows citizens to voice their views. Botswana has the lowest national corruption ranking in Africa. Botswana is highly centralized, and the local government is almost completely dependent on the central government financially (Maundeni 2004). This lack of local government power and authority helps explain the low political participation in Botswana. To combat this Botswana has been embracing decentralization to increase the authority of local governments, and in turn, increase the political participation in Botswana (Mooketsana et al. 2017). Unfortunately, this process of decentralization failed because all the official power remained with the central government. However, there is a traditional precolonial form of participatory democracy present that still functions today; the Kgotla. The kgotla is an open forum for participatory democracy and functions as a space for consensus building, negotiation, and compromise (Ngwenya et al. 2011). The kgotla are led by chiefs who have persistently refused partisan politics (Dusing 2002). The chiefs have a place in Ntlo ya Dikgosi, allowing for the kgotla to influence the policy formulation and implementation of the central government through participatory governance as well. In addition, all village institutions derive their legitimacy from the kgotla, and decisions taken are viewed as binding by all members of the community (Molebatsi 2012). Leading to participatory democratic influences on local and central government. This usage of the Kgotla has also been theorized to be one of the success factors of Botswana's stability (Robinson & Parsons, 2006). Due to this unique form of local participatory governance Botswana has been selected as a case as it can provide unique insights in the relationship between good governance and economic development on the sub-national level.

Ghana is a West African country with over 32 million people. Ghana is a multi-ethnic country with various ethical groups and sub-national differences between ethnical groups. During

colonialism efforts were made to implement good governance dimensions to protect the various ethnic groups (Frimpong, 2017). This effort has continued and made Ghana one of the most stable and democratic countries in western Africa. Ghana has a young population with 57% under 25. During a time in which mane developing African countries struggled with organizing transparent and fair elections Ghana managed to hold at least four consecutive fair elections through a strong electoral college (Debrah, 2011). Promoting good governance in a unique way. Some researchers suggest that through decentralization Ghana might decline good governance on the local level over time as to many institutes compete with each other and traditional leaders on the local level (Fridy & Myers, 2019). Ghana has attempted to increase good governance by decentralization which has not been received to be very efficient by the population according to Fridy & Myers. This is confirmed by another study which suggest traditional leaders such as chiefs are more efficient at bringing people and government closer (Gyedu Kwarkye & Article, 2021). Unfortunately, these local chiefs have been neglected in the decentralization process and have no official role in local governance (Honyenuga & Wutoh, 2019).The above-mentioned factors have led Ghana to be included in this study as it can provide unique insights in the relationship between good governance and economic development on the sub-national level.

Tanzania is a country in East Africa within the African Great Lakes region with a population of 59.73 million people. Africa's highest mountain, Mount Kilimanjaro, is located within Tanzania. Like other countries selected Tanzania has made a tremendous effort to improve good governance by decentralization (Mgonja, 2010). Tanzania has attempted to achieve this through devolution, empowering local units of government to set their own string of rules and regulations. Including empowering local authorities to raise taxes and financial resources. Since 1996 the Tanzanian government has embraced "decentralization through devolution" as its official policy. There have been signals that this process of decentralization is not implemented as the central government might forces local authorities to implement the central government's plans (Mgonja, 2010). This has been confirmed by various studies to be that case as the ministry responsible for decentralization holds tremendous power over the local authorities (Likwelile et al., 2018). The Tanzanian process of decentralization however remains interesting as it is extreme compared to other effects of decentralization in African countries. Tanzania has also made progress in implementing good governance through public finances. By decreasing corruption and increasing transparency Tanzania has been able to ensure an increase in foreign aid and make the economy more efficient (Gray & Khan, 2010). The above-mentioned factors have led Tanzania to be included in this study as it can provide unique insights in the relationship between good governance and economic development on the sub-national level.

Uganda is a landlocked country in east Africa with 44.7 million people. Many different ethnical groups with different customs and political structures are within Uganda, the support for democracy has been declining and differs between groups (Kibirige, 2018). Additionally, voter trust has been op the decline nationally. This is possibly related to the failed decentralization plans in the past in Uganda (Kuenzi & Lambright, 2019; Makara, 2018). Education is rising within Uganda, yet this does not have the expected decreasing effect on poverty (Datzberger, 2018). This goes against the established literature which would expect the rise of education to impact the decline of poverty. Most of this has been attributed to problems implementing policies and the exclusionary effect of poverty within Uganda according to Datzberger. Uganda is unique in that it is one of the top refugee hosting countries within Africa (Ahimbisibwe, 2019). This has led to even more different ethnical groups within Uganda and has caused a strain on the already limited resources present in the country. Due to Uganda having some of the most progressive and welcoming refugee laws this is likely to continue in the future. The above-mentioned factors have led Uganda to be included in this study as it can provide unique insights in the relationship between good governance and economic development on the sub-national level.

3.4 Variables

All variables have been summed up in appendix 1, as well as their respective survey questions per round and are further explained in this section. The data on economic development was taken from the sub-national human development index from the Global Data Lab and the HDI from the United Nations Development Program. The HDI serves as the first dependent variable and is based upon three dimensions; Long and healthy life, knowledge and a decent standard of living and is collected from the human development reports. Each dimension is further expanded in different indicators as further explained in figure 5 (United Nations, 2022). In this study the HDI will represent national development. The sub-national human development index (SHDI) data serves as the second dependent variable. The SHDI indicates countries combined achievements in education, health and standard of living. It has become the key reference of the United Nations Development program indicator to assess countries socio-economic performance (Smits & Permanyer, 2020). The SHDI and HDI range from 0 to 1, with 0 indicating the worst and 1 indicating the best and is an average of the subnational values of three dimensions: education, health and standard of living. HDI is coded as HDI, and SHDI is coded as SHDI.
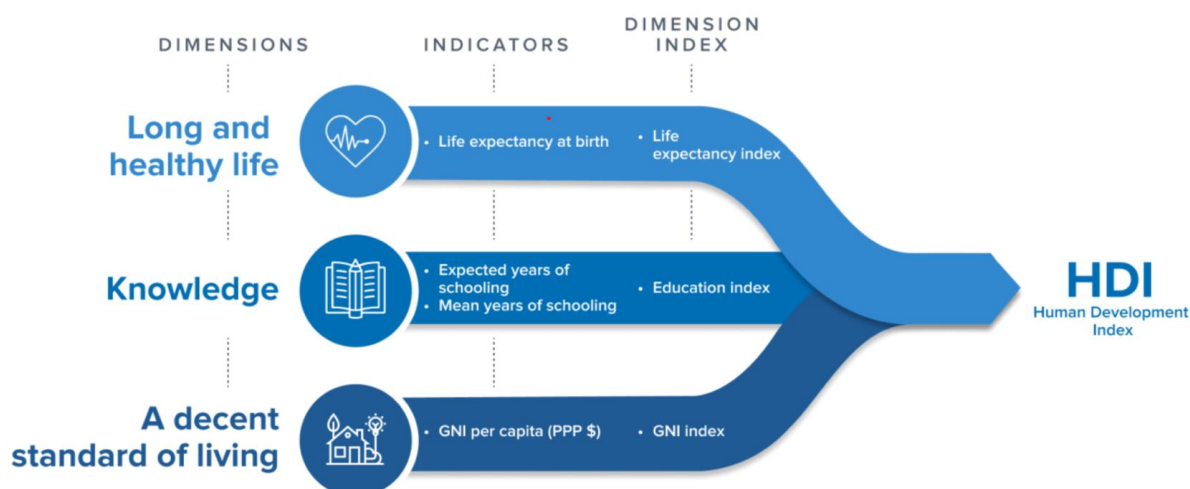
Figure 5: visual explanation of SHDI.

The first set of independent variables is part of Voice and Accountability and is called "freedom to say what you think." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 1=Not at all free, 2=Not very free, 3=Somewhat free, 4=Completely free, 9=Don't know, 8=Refused to answer, -1=Missing. The survey question is framed as "In this country, how free are you too say what you think?" Freedom to say what you think is coded as FOE. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The second independent variable is also part of Voice and Accountability and is called "Government bans any organization vs join any." It is present in R4, R5, R6, and R7 and has the following values in the original dataset; 1=Agree very strongly with Statement 1, 2=Agree with Statement 1, 3=Agree with Statement 2, 4=Agree very strongly with Statement 2, 5=Agree with neither, 9=Don't know, 8=Refused to answer, -1=Missing. The survey question is framed as "Which of the following statements is closest to your view? Choose Statement 1or Statement 2. Statement 1: The Government should be able to ban any organization that goes against its policies. Statement 2: We should be able to join any organization, whether or not the government approves of it." Government bans any organization vs join any is coded as FOA. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The third independent variable is also part of Voice and Accountability and is called "Media free to publish vs. government control." It is present in R4, R5, R6, and R7 and has the following values in the original dataset; 1=Agree very strongly with Statement 1, 2=Agree with Statement 1, 3=Agree with Statement 2, 4=Agree very strongly with Statement 2, 5=Agree with neither, 9=Don't

know, 8=Refused to answer, -1=Missing. The survey question is framed as "Which of the following statements is closest to your view? Choose Statement 1 or Statement 2. Statement 1: The media should have the right to publish any views and ideas without government control. Statement 2: The government should have the right to prevent the media from publishing things that it considers harmful to society." Media free to publish vs. government control is coded as MF. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The fourth independent variable is also part of Voice and Accountability and is called "Freeness and fairness of the last national election." It is present in R4, R5, R6, and R7 and has the following values in the original dataset; 1=Not free and fair, 2=Free and fair, with major problems, 3=Free and fair, but with minor problems, 4=Completely free and fair, 8=Do not understand the question, 9=Don't know, 98=Refused to answer, -1=Missing. The survey question is framed as "On the whole, how would you rate the freeness and fairness of the last national election, held in [20xx]. Was it." Freeness and fairness of the last national election is coded as FTV. To avoid skewing the data values 98 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The fifth independent variable is part of Rule of Law and is called "trust police." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 0=Not at all, 1=Just a little, 2=Somewhat, 3=A lot, 9=Don't know/Haven't heard enough, 8=Refused to answer, -1=Missing. The survey question is framed as "How much do you trust each of the following, or haven't you heard enough about them to say: The Police?" Trust police is coded as QP1. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The sixth independent variable is part of Rule of Law and is called "trust courts of law." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 0=Never, 1=Rarely, 2=Often, 3=Always, 9=Don't know, 8=Refused to answer, -1=Missing. The survey question is framed as "How much do you trust each of the following, or haven't you heard enough about them to say: Courts of law?" Trust courts of law is coded as QJ1. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The seventh independent variable is part of Rule of Law and is called "people are treated equally under the law." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 0=Not at all, 1=Just a little, 2=Somewhat, 3=A lot, 9=Don't

know/Haven't heard enough, 8=Refused to answer, -1=Missing. The survey question is framed as "In your opinion, how often, in this country: Are people treated unequally under the law?" People are treated equally under the law is coded as ERL. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The eight independent variable is part of Rule of Law and is called "corruption police." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 0=None, 1=Some of them, 2=Most of them, 3=All of them, 9=Don't know/Haven't heard, 8=Refused to answer, -1=Missing. The survey question is framed as "How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Police?" Corruption police is coded as QP2. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

The ninth and final independent variable is part of Rule of Law and is called "corruption courts of law." It is present in R4, R5, R6, and R7 of the Afrobarometer and has the following values in the original dataset; 0=None, 1=Some of them, 2=Most of them, 3=All of them, 9=Don't know/Haven't heard, 8=Refused to answer, -1=Missing. The survey question is framed as "How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Judges and Magistrates?" Corruption courts of law is coded as QJ2. To avoid skewing the data values 8 and 9 have been removed as they do not indicate a measurable response to the question. Missing values have been removed to ensure a complete data set.

As the theoretical framework showed a need for control variables was required. These control variables include data on democracy perceptions. In round 4, 5, 6, and 7 questions were asked regarding household support for democracy, household perception of democracy, and the extend of democracy present from the perspective of the household. As the theoretical framework shows democracy affects good governance and has therefore been included as a control variable in the form of three control questions. Support for democracy is coded as SD and extend of democracy is coded as ED. Both control variables have been changed as well to eliminate skewing numbers 8 and 9 and missing values have been removed to ensure a complete data set.

Finally individual household traits have been included such as age, urbanization of household, gender, employment status, internet usage, television ownership, and education level. This to account for household traits. All control variables have been changed as well to eliminate skewing numbers and missing values have been removed to ensure a complete data set.

3.4 Methodology

The first step in conducting the data analysis was merging the data files. This started with merging the regions, as figures 3 and 4 display the Global Data Lab and Afrobarometer utilized different regions in their data sets for the countries selected. This was done by converting the Global Data Lab regions to Afrobarometer regions, which were often more detailed. Doing it the other way around would have led survey question data to be generalized in larger regions unnecessarily. The second step was merging the SHDI data set, the HDI data set, and the Afrobarometer data set, which was done using STATA , creating a pooled panel data set containing data from 2008, 2013, 2016, and 2019.

As the created data set is a panel data set a Hausman test was conducted to decide between fixed or random effects (Green, 2008, chapter 9). This test determines if the unique errors are correlated with the regressors. To conduct the Hausman test first a fixed effect model was ran, after which the estimates were saved. Then a random effects model was run, after which saving the estimates again. The Hausman test conducted after the previous steps determined a fixed effect model was required to answer the research questions and determine if the hypotheses are correct

To analyze this panel data set a fixed effect panel regression with a large dummy-variable set with time specific effects has been used in which the regions were clustered to account for heterogeneity. This model shows the year specific effects and absorbs the region-specific effects, while still clustering the standard error per region. The models used HDI and SHDI as dependent variables, while the dependent variables differed per hypothesis tested.

Prior to creating the model, the independent variables were tested for correlation, the result of which is displayed in figure 6. As the red displays the variables QP1 & QJ1 and QP2 & QJ2 have a problematic correlation as any correlation above 0.5 is problematic when running a regression (Miller & Yang, 2008). As both QP2 and QJ2 indicate a level of corruption among judges and police this correlation is likely to be explained by wider corruption among rule of law, therefore QJ2 and QP2 will merged and divided into one variable, creating Corruption Rule of Law (CRL). QJ1 and QP1 both indicate trust in judges and police, the correlation is likely due to both variables measure trust in rule of law. The problematic correlation has been resolved by merging and dividing the variables into one variable called Trust Rule of Law (TRL). The establishment of the new merged variables resolves the problematic correlation present in figure 6. The new correlation between the independent variables is displayed in figure 7.

FOE	FOA	MF	FTV	ERL	QP1	QJ1	QP2	QJ2

FOE	1.000								
FOA	-0.0282	1.000							
MF	0.0182	-0.1040	1.000						
FTV	0.1624	-0.1019	0.1160	1.000					
ERL	-0.0711	0.0106	-0.0362	-0.1330	1.000				
QP1	0.0611	-0.0627	0.0310	0.2114	-0.1483	1.000			
QJ1	0.0681	-0.0404	0.0214	0.2281	-0.1551	0.5455	1.000		
QP2	-0.0635	0.0427	-0.0636	-0.1670	0.1599	-0.3159	-0.2256	1.000	
QJ2	-0.0506	0.0094	-0.0308	-0.1706	0.1620	-0.2322	-0.2980	0.5448	1.000

Figure 6: Correlation between independent variables.

	FOE	**FOA**	**MF**	**FTV**	**ERL**	**TRL**	**CRL**
FOE	1.000						
FOA	-0.0282	1.000					
MF	0.0182	-0.1040	1.000				
FTV	0.1624	-0.1019	0.1160	1.000			
ERL	-0.0711	0.0106	-0.0362	-0.1330	1.000		
TRL	0.0734	-0.0591	0.0299	0.2496	-0.1724	1.000	
CRL	-0.0651	0.0301	-0.0542	-0.1920	0.1831	-0.3471	1.000

Figure 7: Correlation between independent variables after creation TRL and CRL.

4. Presentation of Results

Section 4 presents the empirical results of the statistical analyses and discusses the hypotheses presented in section 2. This section begins with various descriptive statistics to provide further insights into the data analyzed. A total of 12 panel data models with fixed effects have been conducted to accept or reject the hypotheses formulated in section 2. These models have been pooled in sets of three, with Table 2 focusing on rule of law, Table 3 focusing on voice and accountability, and Table 4 focusing on good governance. Each set begins with two models containing the independent variables of HDI and SHDI as well as the independent variables. The third and fourth models feature the HDI and SHDI as independent variables with control variables for democracy perceptions and respondents' traits. After the empirical results are presented, the hypotheses are accepted or rejected.

4.1 Descriptive Statistics

Before presenting the descriptive statistics, the model's validity was checked. To test for multicollinearity, a variance inflation factor was utilized. The mean VIF equaled 1.17, indicating that multicollinearity is not present, as a VIF higher than 5 would indicate multicollinearity. The result of the test can be found in Appendix 3. Furthermore, correlation was checked and resolved as described in section 3.4 in order to ensure the model's validity. Influential cases and outliers were excluded based on removing missing values (-1) and questions that respondents refused to answer (99), as the answers generally only ranged from 1 to 5. In this way, all potential influential cases and outliers were removed, and Cook's distance was not required. Finally, homoscedasticity and normality were not an issue, as there were no signs of them present.

As a panel dataset was created, a Hausman test was conducted to decide between fixed or random effects (Green, 2008, chapter 9). This test determines whether the unique errors are correlated with the regressors. To conduct the Hausman test, a fixed effect model was performed first, after which the estimates were saved. Following this, a random effects model was run, after which the estimates were saved once again. Conducting the Hausman test after the previous steps determined whether a fixed-effect model was required to answer the research questions and indicated whether the hypotheses are correct.

After the model's validity was checked, the descriptive statistics were conducted, as presented in Table 1. To analyze the means, standard deviation, and meaning, the figure in Appendix 2 was utilized. Although the Human Development Index and Sub-Human Development Index possess a similar mean, the standard deviation is higher on the sub-national level, resulting in a wider range of min and max. In turn, this suggests a wider variety in development than one would assume based

on the mean alone. This further suggests that regional inequality is present based upon this initial descriptive analysis. This inequality is present in development measures, but it is also echoed by high standard deviation in good governance variables. Additionally, freedom of association and media freedom possess a larger standard deviation than the other variables, suggesting that these variables are more unequal among the households interviewed.

Variable	Obs	Mean	Std. dev.	Min	Max
Human Development Index	21,522	.5628	.0714	.465	.735
Sub-human Development Index	21,522	.5619	.0849	.411	.815
Freedom of Expression	21,522	3.485	.7927	1	4
Freedom of Association	21,522	2.942	1.199	1	5
Media Freedom	21,522	2.186	1.204	1	5
Freedom to Vote	21,522	3.287	.9344	1	4
Trust Rule of Law	21,522	1.675	.9538	0	3
Equality Rule of Law	21,522	1.438	1.008	0	3
Corruption Rule of Law	21,522	1.600	.8853	0	3

Table 1: Descriptive statistics Panel data

4.2 Rule of Law and Development

Interpreting the magnitude of the coefficients is difficult as the independent variables are based upon questionaries. Appendix 2 indicates the range of answers respondents could choose from, often ranging from 'strongly disagree' to 'strongly agree', which were coded numerically. Due to the fact that these categories were ranked, no dummy variables were assigned. To be able to assess the magnitude of the effect of the independent variables, the coefficients will be interpreted using this numerical scale, while keeping in mind this is an imperfect method of interpretation. The

questionary nature of the independent variables does however pose a limitation which will be further discussed in section 5.

In Table 2, the results of the first four regressions are displayed. Models 1 and 3 use HDI as independent variable to gain insights on the relationship between rule of law and national development. Models 2 and 4 use SHDI as independent variable to gain insights on the relationship between rule of law and sub-national development. The third and fourth model include various control variables regarding democracy and individual traits, additionally two interaction terms have been included. These four models allow deeper insights into hypotheses 3 and 4. The first interaction term aims to observe if corruption of rule of law has a different effect on development when gender is considered. The second interaction term aims to observe if perceived equality rule of law has a different effect on development when the urbanization of the questioned household is considered.

Based upon Table 2, it is safe to say that corruption rule of law and trust rule of law are significantly negative related to development. Corruption of the rule of law indicates a negative relationship with SHDI and HDI. The magnitude of the effect is small, it is however significant. For every additional step on this 0-4 scale the (S)HDI is expected to increase on average by 0.003 and 0.002 in models 1 and 3, or in other words 0.3% and 0.2% (due to the 0-1 scale of the (S)HDI). When looking at table 2 small differences between HDI and SHDI become clear, these are however of small magnitude. (S)HDI is expected to decrease by 0.001, or 0.1%, for every increase in scale. Trust rule of law indicates a negative relationship with (S)HDI, it however becomes an insignificant predictor of (S)HDI once the control variables and interaction terms are introduced in model 3 and 4. This indicates that the more households distrust the rule of law and view it as corrupt, the more it has a negative effect on development. There is no large difference between national and sub-national development and the relationship is comparable on the different levels.

Equality rule of law is highly significant and shows a positive relationship to (S)HDI. Model 1 indicates that it is to be expected that for every increase in scale of, thus the more unequal people are treated under rule of law, the HDI increases by 0.0023, or 0.2%. Model 2 indicates for every additional scale SHDI increases by 0.0025, or 0.3%. Both Model 3 and 4 indicate an increase in magnitude when control and interactions are considered. It is therefore to be expected that (S)HDI will increase by 0.0063, or 0.6%, for every additional scale on equality under rule of law.

Almost all the individual traits are highly significant in relationship to development besides education. The perceived extend of democracy is negatively related to development. The first interaction term is significant on the national level but insignificant on the sub-national level, making it hard to draw firm conclusions on this interaction. The second interaction term is highly significant and negatively related to development. Indicating equality rule of law combined with urbanization ensures a significant and negative relationship to (S)HDI. The magnitude of this relationship is limited as for every step up the scale (more unequal and more rural), a decrease in (S)HDI of 0.003, or 3%, is to be expected. This is interesting as part of the previously mentioned positive relationship between equality rule of law and development is significantly influenced by household urbanization. Large enough to swing the relationship into a highly significant negative one.

To conclude, corruption rule of law indicates a clear negative relationship with (S)HDI. If more people view the rule of law as corrupt, a decrease in (S)HDI is to be expected. Trust rule of law is slightly significant at first, yet loses significance in model 3 and 4, therefore firm conclusions cannot be drawn upon trust rule of law. Finally, equality rule of law indicates a positive relationship with (S)HDI. If more people view the rule of law as unequal, an increase in (S)HDI is to be expected. This however transforms into a negative relationship when urbanization is considered as clearly shown by interaction 2. Thus, indicating that when people view the rule of law as more corrupt and unequal a negative effect on development is expected, confirming hypothesis 3 and 4.

Predictor Variable	FE Panel HDI	FE Panel SHDI	FE Panel HDI C	FE Panel SHDI C
Corruption Rule of Law (CRL)	-.0029***	-.0030***	-.0016*	-.0021***
Equality Rule of Law (ERL)	.0023***	.0025***	.0063***	.0063***
Trust Rule of Law (TRL)	-.0012**	-.0009*	-.0004	-.0003
Support for Democracy (SD)			.0004	-.0001
Extend Democracy (ED)			-.0032***	-.0025***
Age (AGE)			.0001***	.0001***
Urban or rural (URBRUR)			.0159***	.0169***
Gender (GEN)			.0016***	.0012**
Employment status (EMP)			-.0015***	-.0012***
Internet usage (IU)			.0027***	.0026***
Education level (EDU)			-.0002	.0001
Television ownership (TVO)			.0112***	.0114***
Interaction 1 (CRL*GEN)			-.0007*	-.0004

Interaction 2 (URBRUR*ERL)			-.0030***	-.0028***
N	21,522	21,522	21,522	21,522
Constant	0.5662	0.5647	0.5385	0.5340
R^2 Within	0.0169	0.0170	0.1602	0.1525
R^2 Between	0.2760	0.1168	0.5296	0.4162
R^2 Overall	0.0002	0.0004	0.1659	0.1276

*p<0.1; **p<0.05; ***p<0.01

Table 2: Regressions Rule of Law and (S)HDI.

4.3 Voice and Accountability and Development

In Table 3, the results of the second pair of four regressions is displayed. Models 1 and 3 use HDI as independent variable to gain insights on the relationship between voice and accountability and national development. Models 2 and 4 use SHDI as independent variable to gain insights on the relationship between voice and accountability and sub-national development. The third and fourth model include various control variables regarding democracy and individual traits, additionally three interaction terms have been included. These four models allow deeper insights into hypotheses 5 and 6. The third interaction term aims to observe if freedom of association has a different effect on development when gender is considered. The fourth interaction term aims to observe if media freedom has a different effect on development when tv ownership of the questioned household is considered. Finally, the fifth interaction term aims to observe if freedom of expression has a different relationship with development when internet usage is considered. When looking at Table 3, the relationship between voice and accountability and development becomes clear. Freedom of expression is an insignificant predictor of HDI and SHDI. Freedom of media on the other hand indicates a negative relationship with HDI and SHDI. Albeit the magnitude of this effect is relatively small. For every additional step on this 1-5 scale the HDI is expected to increase on average by 0.003 in models 1 to 3, or in other words 0.3% (due to the 0-1 scale of the (S)HDI), and by 0.3% in model 4. Thus, an increase in support of media freedom has a significant, albeit relatively small, positive impact on HDI and SHDI. Freedom of association also indicates a negative relationship with SHDI and HDI. For every additional step on this 1-5 scale the HDI is expected to decrease on average by 0.006 and 0.005 in models 1 and 3, or in other words 0.6% and 0.5% when control variables were considered in model 3. SHDI is expected to decrease on average by 0.006 and 0.004 in model 2 and 4. Thus an increase in freedom of association has a significant, albeit relatively small, negative impact on (S)HDI. Freedom to vote displays a significant, yet again relatively small, negative relationship to SHDI and HDI.

Almost all the individual traits are highly significant in relationship to development besides education. The magnitude differs per control variables, the answer scales and numerical attribution have been included in appendix 2. The control variables indicate interesting relationships between independent variables and control variables. Interaction term 3 (freedom of association * gender), indicates a highly significant, yet quite small, negative relationship with development. Indicating Freedom of association remains negative when gender is considered. The fourth interaction term (media freedom * television ownership) displays a significant, yet small, negative relationship to development. Indicating a reversal, once media freedom for those who own a television increases, an increase in development is expected. Finally, interaction term 5 (freedom of expression * internet usage) indicate a significant, yet small, negative relationship to development. The cause for this is unclear as freedom of expression is insignificant and television ownership is positively related to development.

Due to the reversed numerical question ranking, as displayed in appendix 2, further explanation is required on these relationships. A numerical increase in freedom of association and freedom to vote is related to an increase in freedom of association and freedom to vote. A numerical increase in media freedom on the other hand, is associated with a decrease in media freedom. Thus, the observed relationships in the empirical results indicate that an increase in freedom to vote, freedom of association, and media freedom are expected to decrease (S)HDI. Firmly rejecting hypotheses 5 and 6.

Predictor Variable	FE Panel HDI	FE Panel SHDI	FE Panel HDI C	FE Panel SHDI C
Freedom of Expression (FOE)	-.0012	-.0019	.0002	-.0008
Freedom of Association (FOA)	-.0059***	-.0055***	-.0047***	-.0044***
Media Freedom (MFC)	.0030***	.0030***	.0030***	.0028***
Freedom to Vote (FTV)	-.0058***	-.0038***	-.0052***	-.0033***
Support for Democracy (SD)			.0008**	.0003
Extend Democracy (ED)			-.0018***	-.0017***
Age (AGE)			.0001***	.0001***
Urban or rural (URBRUR)			.0113***	.0125***
Gender (GEN)			.0040***	.0037***
Employment status (EMP)			-.0012***	-.0010**
Internet usage (IU)			.0023***	.0022***
Education level (EDU)			-.0001	.0002

Predictor Variable				
Television ownership (TVO)			.0126***	.0122***
Interaction 3 (FOA*GEN)			-.0005***	-.0004**
Interaction 4 (TVO*MF)			-.0015***	-.0015***
Interaction 5 (IU*FOE)			-.0009***	-.0006**
N	21,522	21,522	21,522	21,522
Constant	0.5968	0.5904	0.5652	0.5575
R^2 Within	0.1565	0.1134	0.2750	0.2301
R^2 Between	0.7368	0.4929	0.1468	0.1935
R^2 Overall	0.0005	0.0000	0.0908	0.080

*p<0.1; **p<0.05; ***p<0.01

Table 3: Regressions Voice and Accountability and (S)HDI.

4.4 The Relationship between Good Governance and Development

Finally, both previous models have been combined including all independent variables and interaction variables to accept or reject hypotheses 1 and 2 in table 4. Models 1 and 3 use HDI as independent variable to gain insights on the relationship between good governance and national development. Models 2 and 4 use SHDI as independent variable to gain insights on the relationship between good governance and sub-national development. The third and fourth model include various control variables regarding democracy and individual traits, additionally all five interaction terms have been included.

Predictor Variable	FE Panel HDI	FE Panel SHDI	FE Panel HDI C	FE Panel SHDI C
Freedom of Expression (FOE)	-.0012	-.0018	.0002	-.0004
Freedom of Association (FOA)	-.0058***	-.0054***	-.0046***	-.0044***
Media Freedom (MFC)	.0029***	.0030***	.0029***	.0028***
Freedom to Vote (FTV)	-.0058***	-.0038***	-.0052***	-.0033***
Corruption Rule of Law (CRL)	-.0027***	-.0028***	-.0013*	-.0018***
Equality Rule of Law (ERL)	.0017***	.0021***	.0056***	.0057***
Trust Rule of Law (TRL)	-.0003	-.0004	.0001	.0001
Support for Democracy (SD)			.0008**	.0003
Extend Democracy (ED)			-.0016***	-.0015***
Age (AGE)			.0001***	.0001***
Urban or rural (URBRUR)			.0149***	.0159***

Gender (GEN)			.0029***	.0022***
Employment status (EMP)			-.0012***	-.0010**
Internet usage (IU)			.0042***	.0039***
Education level (EDU)			-.0001	.0002
Television ownership (TVO)			.0122***	.0118***
Interaction 1 (CRL*GEN)			-.0008**	-.0005
Interaction 2 (URBRUR*ERL)			-.0027***	-.0026***
Interaction 3 (FOA*GEN)			-.0005***	-.0004**
Interaction 4 (TVO*MF)			-.0008***	-.0006*
Interaction 5 (IU*FOE)			-.0006**	-.0005
N	21,522	21,522	21,522	21,522
Constant	0.5990	0.5918	0.5575	0.5502
R^2 Within	0.1682	0.1260	0.2812	0.2367
R^2 Between	0.7051	0.4575	0.1155	0.1578
R^2 Overall	0.0003	0.0001	0.0874	0.0778

*p<0.1; **p<0.05; ***p<0.01

Table 4: Regressions good governance and (S)HDI.

The results of the previous models are confirmed in model 4 as the independent variables have the same relationship as in the separate models. Freedom of expression remains insignificant, however freedom of association, freedom of media, and freedom to vote all indicate a negative relationship with development when the opposing numerical questions as displayed in appendix 2 are taken into account. Thus, indicating an increase in voice and accountability freedoms is expected to have a negative effect on development, rejecting hypotheses 5 and 6 "Voice and accountability has a positive relationship with economic development on the national and sub-national level". Corruption rule of law and equality rule of law are expected to have a negative impact on development when the numerical questions are taken into account, confirming hypothesis 3 and 4: "Rule of law has a positive relationship with economic development on the national and sub-national level". As these relationships become clear, it becomes evident hypotheses 1 and 2 are not clearly accepted or rejected as 'rule of law' and 'voice and accountability' have opposing effects as indicated by the empirical results in table 2, 3, and 4.

5 Conclusion and Discussion

By using a unique database consisting of Afrobarometer, Global Data Lab, and United Nations Development Program data, this study investigates the relationship between sub-national good governance and development. This study explores the empirical correlations and did not attempt to investigate causality. The dependent variables have been sub-national and national development to observe if a difference between development levels is present. As good governance consists of multiple dimensions, this study focused on the dimensions of 'rule of law' and 'voice and accountability' as independent variables. 'Rule of law' was further divided into three independent variables: trust rule of law, equality rule of law, and corruption rule of law. 'Voice and accountability' was likewise divided into four independent variables: freedom of expression, freedom of association, media freedom, and freedom to vote. Additionally, various control variables regarding perceptions of democracy and household traits were included in order to enhance this study's internal validity by limiting the influence of confounding variables.

After observing Botswana, Ghana, Tanzania, and Uganda on a sub-national level, broad evidence was found that sub-national good governance influences national and sub-national development in the same direction. Answering sub-question 1: "*Does this relationship differ on the national and sub-national level?*". No evidence was found that there are different directions found between the sub-national good governance and national and sub-national level development. As the literature on this topic is sparse it is hard to compare the results between this study and existing studies when it comes to the difference between good governance and development on the national and sub-national level.

This study represents one of the first to examine this relationship due to a lack of literature on the subject. There are small differences in the empirical results, such as a different relationship between development and perceived trust in rule of law when both rule of law and voice and accountability are included. Interestingly, empirical results on the relationship between sub-national good governance and development indicate variation in magnitude between national and sub-national levels. Answering sub-question 1 enables using good governance literature to estimate the relationship between sub-national good governance and development, as the empirical results suggest the relationship is in the same direction, established literature can be used to determine directions. The literature further suggests that national good governance has a positive relationship with development and is vital for development (Ezcurra & Rios, 2020; Kaufmann et al., 2009; Mohammadi et al., 2017; Rodríguez-Pose & Garcilazo, 2015; Weiss, 2000).

The previous chapter provides broad evidence that sub-national rule of law is positively related to development. Confirming the hypotheses based upon the established literature. The more positive perceptions households have regarding equality and corruption of rule of law, the better the effect on development. This relationship between corruption of rule of law and development was expected on the national level according to established literature (Qayyum & Haidar, 2012; La Porta et al., 1998; Djankov et al., 2002). On the sub-national level, corruption of rule of law was expected to produce an insignificant effect on development according to Nwabuzor (2005). This study therefore provides counteracting results. Meanwhile, trust in rule of law proved to be insignificant. Overall, the results present a clear sign that the relationship between rule of law and development is positive, thus answering sub-question 2: "*What is the relationship between rule of law and economic development on the sub-national level*?" As this study examines developing countries, the literature suggests that rule of law would be an important positive variable when looking at development (Akanbi & Shehu, 2012; Decker & Lim, 2008). This study confirms this relationship remains important when looking at sub-national rule of law, rather than national rule of law.

The previous chapter provides evidence sub-national voice and accountability has a negative relationship with development. An increase in household perceptions of the quality of freedom of association, media freedom, and freedom to vote has a negative relationship with development. Rejecting the hypotheses created by utilizing the established literature. Overall, the empirical results of the models enable answering the final sub-question: "What is the relationship between voice and accountability and economic development on the sub-national level?" Specifically, this relationship is negative, as an increase in voice and accountability is expected to decrease development on average. This is unexpected as the literature suggests a positive relationship between voice and accountability and development (Alam & Ali Shah, 2013; Ghebremusse, 2018; Helao, 2015; Nelson & Singh, 1998; Prendergast, 2005). These studies however have been conducted using national good governance data. As this study did not include national good governance data, it is hard to specify if this would have confirmed or rejected the relationships found by previous studies. An additional explanation can be found in a study by Nelson and Singh (1998), who come to a similar conclusion. Their explanation is that political freedom leads to increased corruption and bribery, thus negatively impacting development. However, this relationship appears to be temporarily as Nelson and Singh (1998) discover that in the long run the relationship between voice and accountability and development becomes positive. To determine if this holds up for sub-national voice and accountability as well additional studies will have to be conducted.

With the sub-questions answered using literature and empirical results, this study's main research question, "*What is the relationship between sub-national good governance and economic*

development on the sub-national level?", becomes answerable in turn. Specifically, the empirical results indicate that sub-national good governance and development share a mixed relationship. As rule of law displays a clear positive relationship with development, while voice and accountability displays a negative relationship with development. The direction of the relationships is the same on the national and sub-national level of development. As this study primarily looked at the direction of the relationship rather than the magnitude it is difficult to specify the extent of this positive and negative relationship. Therefore, the answer to the research question is, good governance is complex and the different dimensions of good governance have different relationships to development. As this paper explored empirical correlations and did not attempt to investigate causality it is also not possible to determine if development causes sub-national good governance, or vice versa.

To gain a full picture on the relationship between sub-national good governance and development future studies might expand upon this study by including all dimensions of good governance. Additionally, the conflicting relationship between voice and accountability and development suggest an inclusion of national good governance might allow for future studies to bridge the gap between the empirical results of this study and established literature. Additionally, the limitations of survey data made it difficult to interpret the magnitude of the empirical results to full satisfaction. As this study focusses on the direction of the relationship this provides opportunities for future studies to focus on the magnitude of the relationship between sub-national good governance dimensions and development. Albeit the relationship between sub-national good governance and development has become clearer due to this study a limitation remains in the interpretation of the magnitude of this relationship. Future studies can therefore focus on interpreting the magnitude of this relationship. To apply this relationship to policy making the magnitude will first have to be further investigated. Finally, there might be unexplored relationships between sub-national good governance and other SDGs, forming an excellent start for future research.

This study possesses various limitations, the first of which concerns the usage of low- and mid-income countries. The literature suggests that this affects the empirical results, as the relationship between good governance and development can potentially differ between low-/mid-income countries and high-income countries. In turn, this could potentially provide grounds for future research, as the literature remains sparse on this relationship. A second limitation concerns the usage of survey data. Afrobarometer data was employed to observe the effects over time, but the survey questions varied, and some relevant questions had to be removed to prevent inconsistencies between the years. Another potential limitation concerns the amount of household

data utilized. A total of 21,255 households have been used in this study, divided over 75 regions. If more households and regions are included, the relationship between good governance and development can be explored even further. Due to time constraints, however, this was not performed in this study, though future research might warrant this. Finally, another limitation is regarding the magnitude of the relationships. Most relationships detected, albeit significant, were in the 0.00 range. As not all good governance variables were included this ensures the research question cannot be confidently answered completely. If all good governance dimensions would have been included this limitation could perhaps have been overcome.

This study offers potential policy implications for the field of international economics and development. This study contributes to a better understanding of regional inequality by improving the understanding of the relationship between sub-national good governance and development. The results of this study indicate sub-national good governance has an effect on development, thus contributing to a better understanding of regional inequality and differences in development. Regional inequality is problematic, as it comes with multiple negative side effects for society (Bailey et al., 2020; Giannakis & Bruggeman, 2017; Rodríguez-Pose, 2018). Traditional approaches to regional inequality and poverty have not had the desired effects as inequality and poverty are currently on the rise. This study provides a small contribution to future studies and policymakers by establishing the importance of sub-national good governance. Sub-national good governance has an effect, albeit not of large magnitude, on development. The relationship between sub-national rule of law and development is in line with prior national good governance studies, the relationship between development and voice and accountability however is not. The practical implications for policymakers and multilateral organizations alike ensure that this study has relevance. By accounting for regional differences in good governance, development programs and policies can be made more efficient. In turn, this will likely have a positive influence on sustainable development goal (SDG) 1 (no poverty), SDG10 (reduce inequality within and among countries), and SDG16 (promote just, peaceful, and inclusive societies).

This study is one of the first to examine the relationship between sub-national good governance and development in low- and mid-income-level countries. The empirical results establish a positive relationship between sub-national rule of law and development, while establishing a negative relationship between sub-national voice and accountability. Ensuring a conflicting direction among the two good governance variables included in this study. Furthermore, the findings indicate that the relationship between sub-national good governance and development is the same for the sub-national and national level. This study confirms the importance of sub-national good governance when discussing development. The relationships detected have been differently than expected by

looking at the literature on national good governance. Providing interesting finds for policy makers and researchers alike.

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Appendix 1

VARIABLE	INDICATES	TYPE	DATABASE	ROUND/YEAR
HDI	Human Development Index	Dependent 1	GDL	2008, 2013, 2016, 2019
SHDI	Sub-human Development Index	Dependent 2	UNDP	2008, 2013, 2016, 2019
FOE	Freedom of Expression	Independent	Afrobarometer	4, 5 ,6 ,7
FOA	Freedom of Association	Independent	Afrobarometer	4, 5 ,6 ,7
MFC	Media Freedom	Independent	Afrobarometer	4, 5 ,6 ,7
FTV	Freedom to Vote	Independent	Afrobarometer	4, 5 ,6 ,7
QJ1	Trust courts of law	Independent	Afrobarometer	4, 5 ,6 ,7
QP1	Trust Police	Independent	Afrobarometer	4, 5 ,6 ,7
TRL	Trust Rule of Law	Independent	Merge QP1&QJ1	4, 5 ,6 ,7
ERL	Equality Rule of Law	Independent	Afrobarometer	4, 5 ,6 ,7
QP2	Corruption police	Independent	Afrobarometer	4, 5 ,6 ,7
QJ2	Corruption judges and magistrates	Independent	Afrobarometer	4, 5 ,6 ,7
CRL	Corruption Rule of Law	Independent	Merge QP2&QJ2	4, 5 ,6 ,7
SD	Support for democracy	Control	Afrobarometer	4, 5 ,6 ,7
ED	Extent of democracy	Control	Afrobarometer	4, 5 ,6 ,7
AGE	Age	Control	Afrobarometer	4, 5 ,6 ,7
URBRUR	Urban or rural	Control	Afrobarometer	4, 5 ,6 ,7
GEN	Gender	Control	Afrobarometer	4, 5 ,6 ,7
EMP	Employment status	Control	Afrobarometer	4, 5 ,6 ,7
IU	Internet usage	Control	Afrobarometer	4, 5 ,6 ,7
EDU	Education level	Control	Afrobarometer	4, 5 ,6 ,7
TVO	Television ownership	Control	Afrobarometer	4, 5 ,6 ,7
RACE	Race	Control	Afrobarometer	4, 5 ,6 ,7

Figure X: Summary of variables.

Appendix 2

CODE	INDICATES	QUESTION	0	1	2	3	4	5
FE	Freedom of Expression	In this country, how free are you too say what you think?	-	Not at all free	Not very free	Somewhat free	Comp letely free	-
FOA	Freedom of Association	Which of the following statements is closest to your view? Choose Statement 1or Statement 2. Statement 1: The Government should be able to ban any organization that goes against its policies. Statement 2: We should be able to join any organization, whether or not the government approves of it.'	-	Agree very strongly with Statement 1	Agree with Statement 1	Agree with Statement 2	Agree very stron gly with State ment 2	Agree with neither
MFC	Media Freedom	Which of the following statements is closest to your view? Choose Statement 1 or Statement 2. Statement 1: The media should have the right to publish any views and ideas without government control. Statement 2: The government should have	-	Agree very strongly with Statement 1	Agree with Statement 1	Agree with Statement 2	Agree very stron gly with State ment 2	Agree with neither

		the right to prevent the media from publishing things that it considers harmful to society.'					
FTV	Freedom to Vote	On the whole, how would you rate the freeness and fairness of the last national election?	-	Not free and fair	Free and fair, with major problems	Free and fair, but with minor problems	Comp letely free and fair	-
TRL	Trust Rule of Law	How much do you trust each of the following, or haven't you heard enough about them to say: Courts of law/police?	None	Some of them	Most of them	All of them	-
ERL	Equality Rule of Law	In your opinion, how often, in this country: Are people treated unequally under the law?	Not at all	Just a little	Somewhat	A lot	-
CRL	Corruption Rule of Law	How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Judges and Magistrates/p olice?	None	Some of them	Most of them	All of them	-
SD	Support for democracy	Which of these three statements is closest to your own opinion? Statement 1: Democracy is preferable to any other kind of government. Statement 2: In some circumstances , a non-democratic	Statement 3: Doesn't matter,	Statement 2: Sometimes non-democratic preferable	Statement 1: Democracy preferable		

		government can be preferable. Statement 3: For someone like me, it doesn't matter what kind of government we have.				
ED	Extent of democracy	In your opinion, how much of a democracy is [ENTER COUNTRY] today?	Not a democracy	A democracy, with major problems	A democracy, with minor problems	A full democracy
AGE	Age	How old are you?	18-99 possible			
URBRUR	Urban or rural	Urban or rural primarily sample unit	Urban	Rural	Sem-Urban	
GEN	Gender	Gender of respondent	Male	Female		
EMP	Employment status	Do you have a job that pays a cash income? [If yes, ask] Is it full-time or part-time? [If no, ask:] Are you presently looking for a job?	No, not looking	No, looking	Yes, part time	Yes, full time
IU	Internet usage	How often do you use: The Internet?	Never	Less than once a month	A few times a month	A few times a week	Every day
EDU	Education level	What is your highest level of education?	0=No formal schooling, 1=Informal schooling only (including Koranic schooling), , , completed , 9=Post-graduate,	2=Some primary schooling, 3=Primary school completed	4=Intermediate school or Some secondary school / high school, 5=Secondary school / high school completed	6=Post-secondary qualifications, other than university e.g. a diploma or degree from a polytechnic or college,	7=Some university, 8=University 9=Postgraduate
TVO	Television ownership	Which of these things do you personally own? [If no, ask:] Does anyone else in your household own one: Television?	No one in household owns	Yes, someone else in household owns	Yes, personally owns		

RACE	Respondent's race	1=Black/African,)	2=White/European	3=Colored/Mixed Race	4=Arab/Lebanese/North African	5=South Asian (Indian, Pakistani, etc.)	6=East Asian (Chinese, Korean, Indonesian, etc.)

Figure x: Questions and answers of independent variables.

Appendix 3

Variable	VIF	1/VIF
IU	1.49	0.671506
EDU	1.46	0.686689
TVO	1.33	0.751339
ED	1.26	0.793631
FTV	1.23	0.814151
TRL	1.17	0.854945
AGE	1.16	0.865336
URBRUR	1.13	0.887851
CRL	1.10	0.912512
FOE	1.09	0.916890
ERL	1.08	0.923599
GEN	1.06	0.946985
EMP	1.05	0.950912
MF	1.05	0.951182
FOA	1.03	0.971107
SD	1.01	0.985767
Mean VIF	1.17	
Variable	VIF	1/VIF